



**Chapter Four: Short-term Decision Making**  
**Scarce Resources Allocation Decisions**

# Chapter Four: Short-term Decision Making

## Scare Resources Allocation Decisions

Everyone's resources are limited, The limited resources may be raw materials, labor hours and machine capacity. When a company has limited resources, management must decide which product to make and sell in order to maximize net income. In situation of limited resource, a company should compute contribution margin per unit of limited resources, and company arranges (order) products according to the higher contribution margin per unit of limited resources.

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**Example:** A company produces five products are (A,B,C,D and E). The estimated demand for these products are (250, 750, 600, 300, and 450) units, respectively.

Sales Price	Variable Cost per unit	Labor Hours per unit	Estimated Demand (Units)	Products
45	30	5	250	A
45	25	4	750	B
40	28	3	600	C
50	32	4	300	D
60	32	5	450	E

**Required:** How many units of each product should the company manufacture?

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Determine resource scarcity

Required hours for production	Labor Hours per unit	Estimated Demand (Units)	Product
1250	5	250	A
3000	4	750	B
1800	3	600	C
1200	4	300	D
2250	5	450	E
<b>9500</b>	<b>Required Hours</b>		
<b>7500</b>	<b>- Available Hours</b>		
<b>2000</b>	<b>= Resource scarcity</b>		

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Determine optimal plan by allocating available labor hours to products that have higher contribution margin per labor hour

Order of products	CM per labor hour	Labor Hours per unit	CM Per unit	variable Cost per unit	Sales Price	Product
5	3	5	15	30	45	A
2	5	4	20	25	45	B
4	4	3	12	28	40	C
3	4.5	4	18	32	50	D
1	5.6	5	28	32	60	E

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Optimal Plan	Available Hours	Labor Hours per unit	Estimated Demand (Units)	Products	Order of products
450	2250	5	450	E	1
750	3000	4	750	B	2
300	1200	4	300	D	3
350	1050	3	600	C	4
0	0	5	250	A	5
	<b>7500</b> <b><del>5250</del></b> <b><del>2250</del></b> <b>1050</b>				